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No. IV.

IMPROVED HORSE-HAIR LOOM.

The SILVER ISIS MEDAL and FIVE POUNDS were presented to Mr. HENRY POTTS, No. 5 Booth Street, Spitalfields, for his Improved Loom for Weaving Horsehair ; a Model of which has been placed in the Society's Repository.

No. 5 Booth Street, Spitalfields,

SIR,

March 14, 1842.

I BEG to inform you that I intend laying before your Society a method for weaving horsehair and other fabrics, that require the use of the hook for drawing the shoot through the warp, without the assistance of the server.

I am, Sir, &c.

*To the Secretary of the
Society of Arts.*

HENRY POTTS.

SIR,

IN laying the model of this invention before your Society, I beg to state that the importance of the invention consists in being enabled to perform the work without the assistance of a server ; for it will be a saving of from three to four shillings per week on each loom, a thing of great importance, seeing that the wages for weaving horsehair and willow-work are so exceedingly low.

I am, Sir, &c.

*To the Secretary of the
Society of Arts.*

HENRY POTTS.

The object of Mr. Potts' improvement on the ordinary horsehair loom is to enable the weaver to dispense with the attendance of a server, whose business it is to place the ends of the horsehair in the hook, which draws them into the shed, where they are secured by the weaver striking up the batten with his left hand.

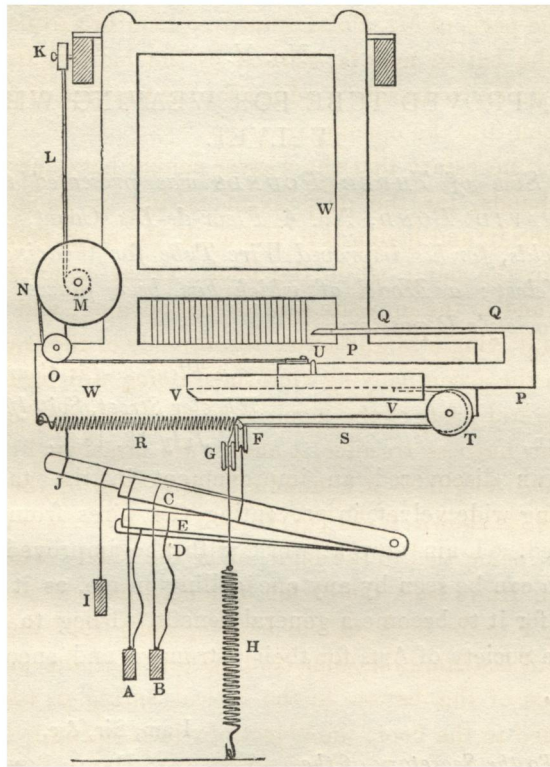
The parts of Mr. Potts' improved loom are so arranged that the batten may be worked by the harness treadles, while an extra treadle is added for the purpose of passing the hook into the opening.

It is necessary that the weaver should have the use of both hands, for the purpose of taking up each shoot, doubling it, and laying it in the hook, the short end being held by the hand, while the hook carries or guides the other end to the opposite side of the opening, and finally leaves it lying straight across the threads of the warp.

In the accompanying view the framing which supports the several parts of the machine is purposely omitted.

The harness treadles, *A* and *B*, are attached by cords of equal length to a common lever *C*, and by the slack strings (as shewn in the cut) to two other levers *D* and *E*, which, being tied to the lams, open the shed; while the lever *C* draws back the batten by a cord passing over the pulley *F* to the back of the batten; and, from the same point of fastening, another cord passes over the pulley *G* in front of the batten to the helical spring *H*, which is attached to the floor, the object of which spring is to pull the batten forward; thus, when either of the treadles *A* or *B* is down, the shed is open, and the batten held back; the treadle *I*, being then depressed, draws down the fourth cross lever *J*, which is connected by a cord with an equal lever *K* pulling its back end down, while its front end rises with the string *L*, pulling round the small

pulley *m*, which is fixed to the hinder part of the larger pulley *n* to increase the motion, a cord from which passes by the pulley to the near end of the slide *p*, and pulls it across the batten. The slide *p* conveys the hook *q* at sufficient height to enter the shed, so as to pass through



it, when the hair, being laid on to the hook, the treadle *i* is released. The hook then flies back, its slide *p* being drawn laterally by the spring *r* and string *s*, which, after passing partly round the pulley *t*, is fixed to the under part of the slide. The slide moves freely in a trough *v v*,

under the staple *u*, the object of which staple is to keep it in its place on the batten *ww*.

The hook *qq*, as shewn in the cut, moves as much more than the treadle *i* as the pulley *n* is larger than the pulley *m*.

No. V.

IMPROVED TUBE FOR WEAVING WIDE
VELVET.

The Sum of THREE POUNDS was presented to Mr. DAVID BOND, No. 4 Fleur-de-Lis Court, Spitalfields, for his improved Wire Tube for Weaving Wide Velvet; a Model of which has been placed in the Society's Repository.

*4 Fleur-de-Lis Court,
Wheeler Street, Spitalfields,
July 18, 1842.*

SIR,

I HAVE discovered an improvement in the tube for making wide velvet, in preventing the wires from being injured. I am now at work with the improved tube, which can be seen by any one calling on me, as it is my wish for it to become a general benefit. I beg to offer it to the Society of Arts for their patronage and encouragement.

I am, Sir, &c.

DAVID BOND.

*To the Secretary of the
Society of Arts.*

In weaving wide velvet, the wire on which the loops of the pile are formed, and afterwards cut, is conveyed into the shed of the warp by being placed in a tube; for the invention